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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/727,413	12/04/2003	Cristian Fierro	OBC-127	7711

24963 7590 04/27/2007
ENERGY CONVERSION DEVICES, INC.
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EXAMINER	
BOS, STEVEN J	
ART UNIT	PAPER NUMBER
1754	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/727,413	FIERRO ET AL.	
	Examiner	Art Unit	
	Steven Bos	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-38,40-47* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 29, 2007 has been entered.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 45 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 45, "wherein the oxygen containing gas is supplied after the sulfuric acid begins reacting the said bulk nickel metal" is new matter.

Applicant points to instant pg. 8, lines 1-3 for support however this only supports adding the oxygen containing gas after the sulfuric acid has been added to the reactor(s) to dissolve the nickel.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 21-38,40-43,45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corson '829.

Corson suggests the instantly claimed process of dissolving scrap nickel metal in sulfuric acid at a first pressure and then adding an oxygen containing gas, eg. air, into a steel cylinder, ie. enclosed reactor column, at a second pressure higher than the first to form nickel sulfate. See cols. 1-3. The taught concentration of sulfuric acid are the same or overlap that instantly claimed. The taught temperatures overlap those instantly claimed. The sulfuric acid pressure is ambient which may not overlap that instantly claimed but is close enough that one skilled in the art would expect similar results because the taught sulfuric acid concentration is the same as or overlaps that instantly claimed and therefore would dissolve the nickel metal. See MPEP 2144.05, section I. The examiner takes Official notice that the use of collection receptacles, multiple reactors, pumps, and precipitation of nickel sulfate from a solution thereof are all well known in the art and thus obvious. It would have been to one skilled in the art to use small pieces of scrap nickel such as those instantly claimed because this would provide more surface area to contact the sulfuric acid than larger pieces.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see In re Malagari, 182 USPQ 549.

Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Corson '829 as applied to claims 21-38,40-43,45 above, and further in view of Subramanian '648.

Corson may differ in not stating that nickel sulfate is converted to nickel hydroxide.

Subramanian teaches that nickel sulfate is converted to nickel hydroxide by adding lime. See the abstract.

It would have been obvious to one skilled in the art to add lime to the nickel sulfate of Corson to form nickel hydroxide as taught by Subramanian because nickel hydroxide is used in battery manufacture.

Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Corson '829 in view of pg. 106 of Elementary principles of chemical processes.

Corson suggests the instantly claimed process of dissolving scrap nickel metal in sulfuric acid at a first pressure and then adding an oxygen containing gas, eg. air, into a steel cylinder, ie. enclosed reactor column, at a second pressure higher than the first to form nickel sulfate. See cols. 1-3. The taught concentration of sulfuric acid are the same or overlap that instantly claimed. The taught temperatures overlap those instantly claimed. The sulfuric acid pressure is ambient which may not overlap that instantly claimed but is close enough that one skilled in the art would expect similar results because the taught sulfuric acid concentration is the same as or overlaps that instantly claimed and therefore would dissolve the nickel metal. See MPEP 2144.05, section I. The examiner takes Official notice that the use of collection receptacles, multiple reactors, pumps, and precipitation of nickel sulfate from a solution thereof are all well known in the art and thus obvious. It would have been to one skilled in the art to use

small pieces of scrap nickel such as those instantly claimed because this would provide more surface area to contact the sulfuric acid than larger pieces.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see In re Malagari, 182 USPQ 549.

Corson may differ in that recycling the sulfuric acid may not be stated.

Elementary principles of chemical processes teaches that chemical reactions do not always go to completion in a continuous process and that it is known in the art to recycle the unconsumed reactant.

Therefore It would have been obvious to one skilled in the art to recycle the sulfuric acid of Corson because this would conserve the reactant and thus save money.

Applicant's arguments filed January 29, 2007 have been fully considered but they are not persuasive.

Applicant argues that the instant claims are not to a process that produces similar results to the process described in Corson.

However applicant provides no reasoning for this statement. It is noted that Corson does teach that nickel contacted with sulfuric acid and oxygen forms nickel sulfate which is as instantly claimed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Bos whose telephone number is 571-272-1350. The examiner can normally be reached on M-F, 9AM to 6PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stan Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven Bos
Primary Examiner
Art Unit 1754

sjb